LC TROUBLESHOOTING

NISA — A Service Alternative

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Your laboratory instrument service can range from fixing it yourself to buying a complete service contract. Independent servicers offer an intermediate alternative unknown to many laboratory workers.

This month's "LC Troubleshooting" deviates a bit from the norm; rather than focusing on liquid chromatography (LC) problems exclusively, I address the more general problem of instrument service in the analytical laboratory. Just as a single optimum method for LC troubleshooting and preventive maintenance is seldom available, there may be no single best way to provide repair services for your laboratory's instruments.

Many service strategies are currently in practice. At one extreme are laboratories in which each worker is responsible for the maintenance and repair of his or her individual instruments. These laboratories can be found in small companies, universities, and companies with limited financial resources. At the other extreme are companies that have a manufacturer's service contract for each instrument, a dedicated in-house service group, or a manufacturer's service technician on-site or on-call. These laboratories are usually part of large chemical or pharmaceutical companies, which can afford specialized in-house service groups but not instrument downtime. In between these extremes is where most of us operate — we fix what we can, and we call in an instrument-company technician to repair the problems we can't fix ourselves.

Over the years, entrepreneurs have started businesses in instrument service, just as others have in instrument manufacturing. Many of these entrepreneurs are former instrument-company service technicians who decided to set up their own service businesses. In 1987, some of these independents formed the National Independent Service Association (NISA) for mutual support. Membership in NISA provided these independent service companies better parts discounts through bulk purchases and access to a resource network that could provide ready help, cross-training, and emergency supplies. In addition, because NISA performs an internal policing function, the organization's members enjoy a reputation for honest, competent, and prompt service.

I discovered one of these companies and the NISA organization about a year ago; since that time, I have surveyed most of the 18 active NISA members for information about the type of service and experience they bring to the laboratory. I'd like to share some of those findings with *LC•GC* readers.

QUALITY

When it's time to call in a service technician to work on a broken instrument, most of us consider three factors: the quality, speed, and cost of the service. To find out how good the service is, let's first look at NISA members' experience to assess the skills they bring to the laboratory.

Although the companies tend to be small (three technicians on average), they provide a wealth of experience — about 15 years of instrument service per technician on average. The survey indicated that this experience came from instrument manufacturers, the military, technical schools, and on-the-job training. Most respondents had participated in more than one of these learning arenas.

Another measure of quality is the spectrum of instruments serviced. Instrument manufacturers have differing philosophies on instrument service. Some companies have a dedicated service team for liquid chromatographs, another for gas chromatographs, and so on. Most companies train service personnel to repair related instruments, such as GC and LC systems. Still other companies have technicians who can service all of the instruments that the company manufactures. Because each of these approaches has good and bad points, there is no single right way to support instrument service.

As the accompanying box shows, NISA members represent the same range of service philosophies as instrument manufacturers. Most respondents can service several types of instruments and general laboratory equipment (balances, pH meters, and so forth). Many NISA members, however, prefer to work on one type of instrument; for example, three companies service centrifuges only.

NISA members enjoy a reputation for honest, competent, and prompt service.

A real strength of NISA service technicians is their ability to service many brands of analytical instrumentation. In fact, this is one of the greatest strengths of these companies and a real advantage for laboratories that use instruments made by a variety of manufacturers or systems with mixed-brand modules.

Calling one person to fix several instruments can save on travel costs and avoid the "not my box" syndrome, which typically goes like this: The user has an LC system that comprises an autosampler, a pump, a detector, and a data system from three or four manufacturers. The system works well, but a problem arises with retention and quantitative reproducibility. Suspecting the pump to be

*Instruments Serviced by NISA Member Companies**

Liquid chromatography instrumentation (10)	Atomic spectroscopy instrumentation (6)
Gas chromatography instrumentation (5)	Mass spectrometers (1)
UV–vis spectrometers (12)	Centrifuges (7)
Infrared spectrometers (5)	Nuclear counters (3)
Nuclear magnetic resonance spectrometers (1)	Personal computers (2)
Inductively coupled plasma spectrometers (3)	Data systems (2)

*The number in parentheses indicates the number of responses to the question, "What kind of instruments do you service?"

the source of the problem, the user calls the pump manufacturer's technician. The technician replaces seals and check valves, but the problem persists. The technician's diagnosis: "The pump's fine; I suspect the autosampler is the problem source, but I'm not allowed to work on another vendor's equipment." So the autosampler service person is called in. . . .

In my experience, most manufacturer service technicians will help you fix the problem, whatever the source, but they are seldom trained on equipment from other manufacturers, and they lack access to spare parts. Although the "not my box" scenario does occur, today's trend toward single-manufacturer systems, which integrate instrument control and data systems, minimizes multivendor-system problems.

SPEED

It doesn't matter how well a job can be done if the repair person can't get to you before the middle of next week. Response time with NISA members varies, but most guarantee next-day service. Companies that service only local clients may promise same-day service. For calls that require out-of-state travel, second-day service may be quoted. For remote locations, such as our Oregon laboratory, next-day service seems like a luxury. Most of the companies also provide telephone consultation and operator training, which can help reduce repair bills.

If you are happy with the manufacturer's service — and most users are — there is no reason to change when the warranty expires.

When I needed repair parts, I was surprised by how fast one NISA service company responded. My detector lamp failed, and I called the manufacturer to order a new one but was told that it would take six weeks because of a back order. In desperation, I called an independent service company, which turned out to have the lamp but not the holder. I sent the old lamp and holder by overnight express delivery and received the working lamp on the second day. They reused my old lamp housing and saved me about $200 and a six-week wait.

COST

The high cost of instrument repair is probably the primary reason laboratories do their own repair and maintenance. Because they are smaller than instrument manufacturers and have lower overhead, NISA member companies may charge less than other service providers. The fees of the NISA members who listed their rates in the survey varied from $65/h to $100/h with an average of $85/h. Actual costs can be reduced by purchasing an annual service contract.

Geographic Distribution of NISA Members*

Arizona (2)
California (4)
Connecticut
Georgia
Maryland (3)
Missouri (2)
Minnesota
North Carolina
New York
Tennessee
Washington

*The number of members is indicated in parentheses if more than one per state.

HOW TO FIND THEM

Most NISA members are clustered geographically in the Northeast and California (see accompanying box), but members are distributed widely enough that most laboratories have access to them. In addition to the locations listed in the box, NISA members — like instrument manufacturers — have service technicians living in other cities or neighboring states who can respond quicky to regional needs.

OTHER ALTERNATIVES

As NISA member Michael Hernandez observed, "After the warranty runs out, you are responsible for the service of your instrument. You have a choice — you can use the OEM [original equipment manufacturer], fix it yourself, or you can call an independent." When choosing instrument service, the adage "if it ain't broke, don't fix it" applies. During the warranty period, service is generally free, so you'd be wasting money by calling an independent service technician. If you are happy with the manufacturer's service — and most users are — there is no reason to change when the warranty expires. However, you may get better service from an independent service company. NISA isn't the only option; many independent service technicians are not affiliated with NISA, and at least one other independent service association also exists.

INFORMATION

For more information about NISA, contact Ed Majerle, NISA president, Lab Performance Specialists, 15531 NE 90th, Redmond, Washington 98052, USA, tel. (800) 447-4169.

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